

Serial No.: 10/797,032

IN THE CLAIMS:

1.-5. (Cancelled)

6. (Currently Amended) A ~~gasdynamic~~ gas dynamic bearing motor comprising:

a stationary shaft having a cylindrical surface; and

a rotor assembly having a cylindrical portion facing the stationary shaft with a predetermined clearance interposed therebetween in a radial direction of the stationary shaft and freely rotatably fitted with the stationary shaft, ~~wherein~~ shaft;

a radial bearing comprising a pressure generating groove is formed on at least one of an outer circumferential surface of said stationary shaft and an inner circumferential surface of said rotor assembly to thereby construct a radial bearing, having a pressure generating groove located therein;

a flange-shaped disk receiving portion extending outwardly in a radial direction ~~is provided at the lower~~ and located at a first end of said rotor assembly, a predetermined number of recording disks are loaded on the disk receiving portion, a clamp ~~is disposed on the uppermost portion and fixed to said~~

Serial No.: 10/797,032

rotor assembly to squeeze the recording disks between the disk receiving portion and the clamp with a predetermined force for fixation of the recording ~~disks,~~ disks; and

a driving motor for rotating said rotor assembly ~~is rotated by a driving motor to hold and holding~~ said rotor assembly and recording disks in a non-contact manner with said stationary shaft, with the action of a dynamic pressure of a gas residing in a clearance between said stationary shaft and said rotor assembly, ~~characterized in that~~ wherein

an outer diameter of said stationary shaft is constant in an axial direction thereof, while a diameter of the inner circumferential surface of said rotor assembly changes in an axial direction thereof when no recording disk is loaded on the disk receiving portion so that a clearance between the outer circumferential surface of said stationary shaft and the inner circumferential surface of said rotor assembly is almost substantially constant in the axial directions thereof when the recording disks are loaded on the disk receiving portion.

Serial No.: 10/797,032

7. (Currently Amended) A ~~gasdynamic~~ The gas dynamic bearing motor according to claim 6, wherein the diameter of the inner circumferential surface of said rotor assembly ~~takes~~ has a minimum value in the substantial middle in the axial direction thereof and changes smoothly in the axial direction thereof to take a maximum value at the lower first end on the disk receiving portion side.

8. (Currently Amended) A ~~gasdynamic~~ The gas dynamic bearing motor according to claim 6, wherein the diameter of the inner circumferential surface of said rotor assembly ~~assumes~~ has a curved shape gradually increasing toward the end on the disk receiving portion side from the substantial middle in the axial direction thereof.

9. (Currently Amended) A ~~gasdynamic~~ The gas dynamic bearing motor according to claim 6, wherein the diameter of the inner circumferential surface of said rotor assembly ~~assumes~~ has a tapered shape increasing toward the end on the disk receiving

Serial No.: 10/797,032

portion side from the substantial middle in the axial direction thereof.

10. (Currently Amended) A ~~gasdynamic~~ gas dynamic bearing ~~motor-motor,~~ comprising:

a stationary shaft having a cylindrical surface; and

a rotor assembly having a cylindrical portion facing the stationary shaft with a predetermined clearance interposed therebetween in a radial direction of the stationary shaft and freely rotatably fitted with the stationary shaft, ~~wherein~~ shaft;

a radial being comprising a pressure generating groove is ~~formed on~~ at least one of an outer circumferential surface of said stationary shaft and an inner circumferential surface of said rotor assembly ~~to thereby construct a radial bearing, having~~ a pressure generating groove located therein,

a flange-shaped disk receiving portion extending outwardly in a radial direction ~~is provided at the lower and located at a~~ first end of said rotor assembly, a predetermined number of recording disks are loaded on the disk receiving portion, a clamp ~~is disposed on the uppermost portion and fixed to said~~

Serial No.: 10/797,032

rotor assembly to squeeze the recording disks between the disk receiving portion and the clamp with a predetermined force for fixation of the recording ~~disks,~~ disks; and

a driving motor for rotating said rotor assembly ~~is rotated by a driving motor to hold and holding~~ said rotor assembly and the recording disks in a non-contact manner with said stationary shaft, with the action of a dynamic pressure of a gas residing in a clearance between said stationary shaft and said rotor assembly, ~~characterized in that~~ wherein

an inner diameter of said rotor assembly is constant in the axial direction thereof, while a diameter of the outer circumferential surface of said stationary shaft changes in the axial direction thereof so that a clearance between the outer circumferential surface of said stationary shaft and the inner circumferential surface of said rotor assembly is ~~almost~~ substantially constant in the axial directions thereof when the recording disks are loaded on the disk receiving portion.

Serial No.: 10/797,032

11. (Currently Amended) A ~~gasdynamic~~ The gas dynamic bearing motor according to claim 10, wherein the diameter of the outer circumferential surface of said stationary shaft ~~assumes~~ has a shape gradually changing so that a diameter ~~takes~~ has a maximum value in the substantial middle in the axial direction thereof and a minimum value at the end on the disk receiving portion side.

12. (Currently Amended) A ~~gasdynamic~~ The gas dynamic bearing motor according to claim 10, wherein the diameter of the outer circumferential surface of said stationary shaft ~~assumes~~ has a curved shape so that a diameter decreases gradually toward the end on the disk receiving portion side from the substantial middle in the axial direction.

Serial No.: 10/797,032

13. (Currently Amended) ~~A gasdynamic~~ The gas dynamic bearing motor according to claim 10, wherein the diameter of the outer circumferential surface of said stationary shaft ~~assumes~~ has a tapered shape so that the diameter decreases toward the end on the disk receiving portion side from the substantial middle in the axial direction thereof.

14. (Currently Amended) ~~A gasdynamic~~ The gas dynamic bearing motor according to claim 6, wherein a difference between ~~the~~ a maximum value and a minimum value of a clearance between the outer circumferential surface of said stationary shaft and the inner circumferential surface of said rotor assembly is ~~equal to or less~~ not greater than one half of the clearance when the recording disks are loaded on the disk receiving portion.

15. (Currently Amended) ~~A gasdynamic~~ The gas dynamic bearing motor according to claim 6, ~~wherein~~ further comprising the annular groove according to claim 1 ~~is provided~~.

Serial No.: 10/797,032

16. (Currently Amended) ~~A gasdynamic~~ The gas dynamic
bearing motor according to claim 6, wherein a difference in
radius between the inner and outer circumferential surfaces of
said rotor assembly is not greater than 3 mm ~~or less~~.

17.-19. (Cancelled)